

CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
416 W. Congress St., Suite 100
Tucson, Arizona 85701
520-770-3500
http://www.azgs.az.gov
inquiries@azgs.az.gov

The following file is part of the

James Doyle Sell Mining Collection

ACCESS STATEMENT

These digitized collections are accessible for purposes of education and research. We have indicated what we know about copyright and rights of privacy, publicity, or trademark. Due to the nature of archival collections, we are not always able to identify this information. We are eager to hear from any rights owners, so that we may obtain accurate information. Upon request, we will remove material from public view while we address a rights issue.

CONSTRAINTS STATEMENT

The Arizona Geological Survey does not claim to control all rights for all materials in its collection. These rights include, but are not limited to: copyright, privacy rights, and cultural protection rights. The User hereby assumes all responsibility for obtaining any rights to use the material in excess of "fair use."

The Survey makes no intellectual property claims to the products created by individual authors in the manuscript collections, except when the author deeded those rights to the Survey or when those authors were employed by the State of Arizona and created intellectual products as a function of their official duties. The Survey does maintain property rights to the physical and digital representations of the works.

QUALITY STATEMENT

The Arizona Geological Survey is not responsible for the accuracy of the records, information, or opinions that may be contained in the files. The Survey collects, catalogs, and archives data on mineral properties regardless of its views of the veracity or accuracy of those data.



340 Vista Ave SE P.O. Box 12397 Salem, OR 97309 Bus. (503) 371-3013 Fax (503) 363-1453 Matelda Muning lac Golden Gols et al Helostia Munishlust Ping Co. AZ

November 08, 1993

J.D. Sell Asarco Inc. P.O. Box 5747 Tucson, AZ 85703

RECEIVED

Re: Matilda Mining, Inc.

NOV 1 5 1993

Dear Mr. Sell,

EXPLORATION DEPARTMENT

My name is Clint Stewart. I'm an Associate Broker with The Prudential Real Estate Professionals hear in Salem, Oregon. I represent a friend who is interested in disposing of some mining claims in Pima County, Az.

I've enclosed some information that I'm sure will make more since to you that it does to me. My understanding is that there are a wide range of minerals available on approximately 2600 acres. The mining rights are listed for \$10,000,000.00, but I'm told to convey some motivation.

I've enclosed some information regarding said property for your use. If you have any questions please call me at 1-800-255-1909. Thank you very much for your consideration.

Sincerely;

Clint Stewart Associate Broker

The Prudential Real Estate Professionals

Œ

THE GOLFN GATE AND ASSIGNATED MINIEG CLAIMS DELVITTA AND OPERATERVILLE DISTRICTS PIMA COUNTY ARIZONA

OTHER BY

ARIZONA MINING AME RETINING COMPANY (AMARCO) 1616 R. Orangewood ave Phoenix Arizona 85020

LOCATION

These claims lie astride the north extention of the Santa Rita rountians about 30 air-line niles S. SE. from Tucson Arizona. They occurs the southern part of the Belvetis Mining District and the Northern part of the Greaterville Mining District. In Sec. 36 T. 18 S. Range 15 E. and in Sec.s 1 and 12 T. 19 S. R 15 E. and in Sec.s 6 and 7 T. 19 S. R. 16 E.

This mining claims group adjoins the main body of claims held by Anamax Copper Kining Go. Infect the northern claims finger up within their claims along the epex to the south limits of the proposed Helvetia open pit mine.

ACCESS

The Box Canyon highway passes through these claims from east to west, Box Canyon forming the boundry line between the two mining districts.

Box Canyon highway connects on its eastern and with Arizona 83 a peved highway extending from U. S. 10 from a point about 22 miles E. SE. from Tucson Arizona to Sommita Arizona. The western end of Box Canyon highway Commets with U. S. 19 between Tucson and Hogales Arizona. The heart of the claims group is about 44 road niles from Tucson VIA either routs.

The Resement Junction read which leaves Arizons 63 about 7 miles north of it's junction with box canyon highway goes up Barrell Canyon to the Jt. about 3 miles then up Wasp canyon 4 miles to our northern or Big Windy Area. This read, the Resement Junction read, traverses much of the property of Anames and part of the open pit mine, to be, before entering the AMARCO claims.

Arisona Mining And Refining Company here—in-efter known as AMARCO built a road, known as the ridge road, connecting the Box Canyon highway to it's north end claims through a connection with the Rosemont Jt. Road. Although all of AMARCO's claims are contiguous there are some claims not yet assesable by roads. AMARCO also built a road up Gold Fish or Sycamore canyon to the Carbonate Silver and the Gold Fish mines, and commenced a road from Dearing Springs canyon to the West Side and Lexington mines. The claims south of the Box Canyon highway can be partially reached through a road in meanlow Valley and a poorly marked one which turns west from the box canyon road at the device south of box canyon. Additional roads were built in the big windy area including stripping roads for the Calcium Carbonate deposit at the upper end of Wasp canyon.

CEOLOGY

While America and it's preicessors in interest have developed considerable geology upon this district it is not generally open yet to others.

Nost of the geology now open to the public consists of that of Schroeder, which is more than a half century old, and winer developments upon it. The ly master's thesis, each contributor content to refer to others no better informed than he.

The geological feature of most prominence is the great Santa Rita Pault. Generally within the Helvotia district this fault lies just below the Mississippian limestone of Levonian age. At it's outcrop it dips steeply east. Her lynn President of Amanax informed the writter some years ago, that farther east, away from the outcrop, it dips only gently east. Within the northern and of this claims group the Mississippian limestone and this fault lies upon quartsite. South of Hig Windy mountain it lies upon the Abrigo sedimenterry series which, according to Eldred Wilson are at this point about 900 thick. And the abrigo series lie in turn upon the quartsite. Further south, notwithstanding the reports of heatwold and others, the lower portion of the abrigo series has been faulted out with porphyrics replacing the sodiments.

The pormhyries also replaced some of the older granetics. The quartaite is the bottom of the sedimentaries in this area, and generaly rest uppon pre-combrian granit.

Within the abrigo series, which consists of, from bottom up, sandstones, shales, martin or Hisbes lineatons and shales, thore are what appear to be mudstons sections. These also appear within the porphyry which replaced part of the series. AMACO has blasted into some of these sections within the porphyry and they seem mostly to be alterations of the porphyry with most of the coloring being furnished by oxidizing pyrite, and the mud slip faulting residue.

The Devonian limstones consist of from the bottom up Rississippian, Pensylvanian and permian. The permian has been largly faulted out at or near the surface by the povement of the conglomerates, as noted hereafter. The completed upper series consists of shales and other limestone according Tilson out within these claims and within the Relvatia District, they are not apparent at the surface.

Economic Kineralization

The economic mineralisation within the immex claims at the north end of these claims, according to Mr. Lynn, President of Ananax, consists of copper replacement minerals in the limestones. This mineralization extends through and unward from the Santa Ritz Fault. The writter does not know of it's thickness, but it has been represented to him as being many hundreds of feet thick.

The copper mineralization is incidental to igneous intrusives below and sometimes through the limestones.

There is insufficient deep exploration within these claims, AMARCO'S, to determine the extent of the mineralization within them. However they occupy the southeard extention of the same structures within which the proven ore reserves of the Helvetia District are reposing, and they have the same surface mineralization, subjund a little because of the elevation differential.

According to a pay statement prepared by Eanner Mining Company and dated March 15, 1973, and with the information ascribed to that furnished be the Anacomia company there is within this deposit presently drilled the following copper minerals;

Sulphide copper 320,000,000 tons with an average copper content of 0.64% I calculating useing a copper cutoff of 0.3% copper, and Oxide minerals 20,000,000 tons with an average grade of 0.55% acid soluble copper calculating using a 0.3% soluble copper cut off.

Surveyors in form the writter that the above deposit is about one mile wide and three long, if so late drilling has extended the deposit north east ward. The writter believes that a portion of this one body lies within AMARCO'S north claims. Widespread mineralization within these claims extending south upon the same geological structure and beginning from the very south boundry of the proven area is sufficient incentive to drill these claims that control the structure apex for some thousands of feet southward.

BIG BINDY HIME AREA

From the south end of the Excelsion patented claim to the middle of the Mohank Silver patented claim The principle mineralization is not within the Santa Rita fault-but within the Juanita faults system, releiving faults-tothe Santa Rita, and lieing east of it at the surface. The principle fault . of the system is Juanita along which at the big windy mine a large garnetized dyke is exposed at the suface for several hundred feet and is exposed at intervals as far north as the blue wing mine. Along the infortry wall, of this dyke lies a vein of very high grade zinc carbonate ere. This ore carries little metal values other than the zinc which avarages over some distance abot 20% Zn. The dyke itself carries zinc, at one cross cut of the dyke it assayed 8.5% Zn. at another 5% Zn. Along the hanging wall is zinc ore of a lessor tenure but very good ore than outside of this copper bearing iron minerals along the fault itself. During word war one and right afterwards several cars of 45% Zn. ore were shipped from the several workings along the footwall of the dyks. There is perhaps 20 tons piled for shipment which now assays plus 46% 2n.

GEOLOGI CONTINUED

Big Ningy mine area continued.

From the old workings ore of a lessor In content but averaging above 15% In. is piled in many piles. Fast of the Juanita fault is the hard fault averaging from four to twenty feet in width. in this fault the replaced ATTERED limestone material is extremly hard and partly garmetized, it carries Copper, silver, kinc, lead, and gold minerals. Still east lies the Cloud Rost fault. This fault carries some silver along it's total exposed length, and localy silver runs 20 to 25 cames per ton. This fault also carries some copper all along it's exposed length with local shutes or kidneys of high grade. Zinc content runs from 3% to eight percent. Lead is present in rich small kidneys and in lessor amounts between. Localy molly is very high. At the surface workings the matal perhaps of greates value and hardest to sell is bismuth. Buch of the gre will carry).4% bismuth. Localy it reaches

All of the limestone for a great distance here is so highly altered as to have no value as limestone. Some of the surface area is now a gossen. South of the Cloud Rest fault there are other faults and veins over a wide area which has been termed colectivly the Juanita veult sone. Individual copper ore kidneys from these asveral faults assayed 5%,7%, 9.3%, 10.4%, and as high as 15% Cu. There is such vugging of the linestone country rock, but most of the vugs near the surface are now empty. The writter has found chalcopyrite and cornite copper within dense limestones where leaching was prevented by the denseess of the rocks, also spalerite. These minerals are quite commen in the silica vein rocks but only in dense country rocks, outside the veins.

Firm about the center, north and south, of the Big Windy claim all of the ore shutes with which the writter is familiar dip south, not north, within the veins and faults. This indicates to the writter that mineralization came from the south, not from the north or the Helvetia proven ore body. This is so inspite of the fact that the block faulting in the linestones dips generaly north. The writter has come to the conclusion that this mineralization is part of another enrichment to the south, probably centered around the Deering Springs.

Complex ores of the Santa Rite and other faults. Ang
About 7,000 fost of the Santa Rita fault apex/within the Helvetia Distric lies within these claims. The fault is from two to seventy feet wide
along this area. About 5500' lie within the greaterville district.

Along the course of this fault there are many shallow workings. All workings which reach the fault disclose important mineralization. Most of the workings disclose economic metal mineralization. Until the recent raise in the value of gold and silver mine was the notal of most economic value along the fault croppings. Just about one year ago the values were evenly devided between base and precessious metals. Now gold is of greatest worth, then mine, silver, then copper and lead. Copper values at and near the surface are close to 1%.

In the Golden Gate mine the upper extentions, which were not economic when mining was in progress now contain much valuable ore. The ore mined here from the contact and Santa Rita faults consisted of about equal parts wine and lead, 10% to 25% each, plus from 0.12 0s. to 1.4 0z. gold end 6.00z. to 20.0s. silver, plus).90 to 1.4% copper which was lost at the mill. All of this ore carried important molly. The ore was not mined below the old tunnel level except for what was produced in the sinking of a winse.

Our immediate predicessor in interest was driving a tunnel at a level 67° below the original level to pick up the lower ore when work was suspended because of the closing of all gold mines by Pres. Roosevelt. This work was never completed. ANARCO started to build another tunnel to intercept this ore at the 180° level but suspended operations for lack of finances. Further north within the golden gate claim several outs and shafts expose economic complex ors.

Within the next claim north the West Side a shaft was sunk to the 85° level from which ore was shipped to the old mohawk smalter. Later high graffers runned the shaft and filled it from workings above. There is extremly high

There is mixed metal mineralization in many faults and contacts throughout the properties. No work has been of the needed depth to prove the existence of sufficient ore to support a mill but the indications are apple to justify a drilling program which might well prove ample ore reserves to support a mill of high tennage from the upper load ores.

THE CONCLORERATES

Portions of these claims are covered with an extremly hard conglomerate capping. Certain geologists have termed this stream flow conglomerate material. Long and close study of the areas involved have convinced the writer that these conglomerates are the result of deep magnic pressure which sheared the sedimentry rocks upward and outward from east of the deering springs. The shearing action progressed diagonaly upward and outward north, west and south leaving very little of the permian at the north end and none at the vest and at the extreme south very little of the botton, the Mississippian limestones.

The composition of the conglomerates supports this theory as there are angular blocks of limestone from small paices to some as large as a room reposing within the masses. There are also lossor amounts of the quartite some of it angular. All of these are cauented together with the solutions and materials eminating from the magma. The fact that much of the materials, limestons and quartite have been flattened only adds up to exposing the great pressures that moved and created these conglomerated materials. The contention that the oval and round quartz and from rocks within the mass prove stream flow is no longer tenable, as there is evidence on the surface of golden gate nountain to prove that these rocks were formed in place after the conglomerates were in there present repose. The stream flow was a magmin

flow from pressures below.

bithin a bypess tunnel in the golden gats wine flow rock is present along with the conglomorates. This tunnel is within the conglomerate mass. Canyons within the area indicate altered dykes, some of limestone, below the conglorcraces, with sheer zones below the dykes. Southeast of Decring spring in areas which should be above the Dovomian linestone Martin or Bisbee linestone; which should be below the devonian nowrecosas. The typess tunnel spoken of above disclosed at its and a portion of the Santa Rita fault which had been segmented and pushed west and south by the conglomerate intrusive. This segment of the fault had been mined out upwards to it's then economical limits. Fownward we found both the fault and it's slikensided footwall rested upon quarta monzonite porphyry which carried very good values in copper and silver and lead. Most of the bypuss tunnel area, although just above the perminent water level, and in an area where the water with each storm would flood it, carried about 0.82 copper. with other metal values of like tenure. At the north and of the conglomerates they are sometimes folded to great depths. At the new portal of the tunnel, proposed but not completed, below the big fault in country rock at 6' it carried 0.2% copper, and at 12' 0.45% copper. Hest of this we found the area highly vugged with the vugs empty except for a trace of copper. East of the golden gute mountain at it's contact with the country rock the contact zone carries mineralization mostly at the surface ov iron. North of the mountain the exposed sheer somes are highly mineralized. At the West side pass a smaller intrusive conglomerate shows copper mineralization at its contact near the linestone. Further north within the Goldon Oak claim there is a wide band of mineralization within the limestone bit close to the conglomerate with a smaller one at the contact Tast of this in a sub ridge the writer found a chunk of copper ore in a conglomorate dyke which had been sheered from its earler resting place below in the upward movement of the materials. Further north within the Big Windy claims copper formed, copper ore, under the conglomerate at it's junction with the limestone. There are also later sub dykes within the conglomerates which show mineralization.

The contact vein at the golden gate mine carries important metal minerals from which much one has been mined and shipped and much remains. This ore complex ore, was deposited after the conglomerates came to repose. The coppercentent of these ores is about 1.0%. There is evidence here that the ore eminated mward through the Santa Rita fault. On a ridge south of Deering spring the writer broke a chunk of rock, altered limestone, from a prominent dyke and found some of the vugs in it filled with copper cobonate ore minerals. Search discovered float pieces of this dyke on the north side of this ridge with some copper minerals still remaining. The vugs mostly carry spadote.

Geology and Economic Minerals continued

Between one quarter and one half mile east of the golden gate mine a trencher brought to the surface broken pieces of quartz carring copper corbonate minerals in abundance. At Decring springs lead gold one was mined and the crust rocks formed from water droping it's mineral load carries some zine and copper is present in the dykes and sheerzones. Perhaps 2500° north of Decring springs along a prominent dyke which passes the springs Thomas Peering dug a discovery shaft which exposes coper corbonate and silicate minerals.

The Gold Claims

Were once occupied by the west Side and Golden Gate claims, in areas which were once occupied by the abrigo series, in remaining portions of the series and within the older granite west of the Porphyries there are many small veins who's principle metal value is gold. Some of these veins are roughly horizontal others are verticle. This is the area of the earliest mining within these claims area. The old arrastra mine, now the Reserve claim, in box canyon dates well back into the 18th century. Here an arrastra, a patic floor and the remains of a small rock oxidizing furnace give evidence of the importance of this claim in early times. Within the north end of the Hest Side No. 1 Claim there is evidence of mining centuries old.

The Silver Carbonate shaft, formerly known as the Wetzler shaft, was despened in the early 1940s to 75° by Sidney Halberg. At that depth the gold values were greater than anywhere above. This work was stopped by President Roosevelt's gold closure proclamation and the subsquant manpower conservation act of the Congress. AMMRCO has done considerable surface mining here some distance north of the shaft at the location of older benck mining, and established the continety of the ore and of it's faulting as shown in the shaft. AMARCO in the year 1973 sponed a new vertical gold lead vein which runs NE. Sh. and intersects the lower bend of the Gold Fish road switchback. The first evidence of a vein here was a very small clear quarts string er. At a little depth several stringers consolidated into a small vein. This vein was faulted by several MM. moving surface post mineral faults. Each of these faults ofset the ore from 16" to 3'0". There are several small veins and stringers, some of them not as yot continuous, paralelling this vein. Lt may develop into an important vein. The values along the central ore shute were 2.90 cunces per ton of gold, 2 cunces silver and 14.5% leads Within the ore shutes of the upper vein north of the shaft values of two bulk samples were 2.55 ounces of gold, 16.9% lead and 3.4 ounces Silver, and 1.875 ounces gold, 2.5 ounces silver, and 16.45 lead. An early individe: ual assay here went 22.22 ounces of gold per ton and the lowest individual sample 0.47 ounces gold per ton.

At the Gold Fish much work was done in 1969 and 23 tons of ore mined which assayed 34.0% lead, 15.0 cunces silver and 0.74 cunces gold. It also carried plus 1.0% copper. The upper workings in a narrow voin assay near 5.0 cunces per ton of gold and the inner stope 1.40 cunces gold.

Assays on the Golden Fleese claim run from 0.25 Oz. AU. from the wide cappings at the top of Indian gold hill to 1.58 Oz. Au. from the small vein parrelelling the north side of Golden Eagle canyon. The golden Eagle shaft dump ore, formerly waste, essays 0.43 cunces Au. per ton. The smallness of the dump shows that much ore was packed off of this rugged mountain. It's value must have been at least 1.0 cunce Au. per ton. This shaft has not been drained or sampled by AMARCO because of the difficulty of transporting equipment to the site.

There are at least three large motal minerals carring faults crossing Indian Gold hill from east to west. The surface assays at the top or upper outcrops are about 1/4 cance Au. per ton. About one falf way down the east side they assay about 0.45 Os. Au. And in places near the bottom up to 0.85 Os. Au. per ton. They should be drilled to see if these values are contineous. These faults extend to the canyon, Gold Fish, at the east, and are with a few hundred feet of a new road that on be extended into the canyon. The south fault is ten feet wide at the canyon and narrows slightly as it climbs the mountain. The others are wider at the crest.

North of the Gold Fish mine a western dipping quartz gold vein whice peralelled the face of the countain was mined out to the canyon floor. This vein extended over a considerable surface area and undoubtedly extends downward below the canyon.

NONE KETALIC MINERALS

A few years ago a prominent geologist told Mr. Elsing Att. that the hottest itom in the area was the limestones of limestone ridge, almost all of which lies within these claims. In addition there is a large deposit of very pure calcium carbonate within the claims.

The calcium carbonate lies north of the Big Windy heavely mineralized zone in the Cloud Rest, Blue Wing and Cloud Rest No. 1 north claims. A small portion of this deposit lies within the patented Excelsior claim owned by Anamax. Much testing has been done upon this material at the surface and it assays from plus 97% Calcium Carbonate to plus 99%. Also extensive testing for toxic content has been done with none so far found. Euch of this ore is very white % bright, being of paint pigment and pigment extender grades. There is known to be 1.5 million tons above the 65' level on the east side of Wasp conyon. There is an equal amount on the west side of the canyon to the same depth. But as the structure dips to the east, this on the west side and in the center can be mined to a much greater depth. Removal of upper overburden at the ridge crest along the north one half of this deposit is possible as the AMARCJ holdings here cross over the ridge, however the overburden would be thick. Undergorund . mining of the higher quality materials may also be possible. This deposit has but little overburden except that which is structuraly above it.

South of the Big Windy Intensive mineralization begining in the extreme southern end of the Big Windy claim is limestone ridge. A very little at the extreme No. corner of it lies within the Wohawk Silver claim of the Ananax Co. All of the rest of the ridge and it's eastern, underground extentions lie within these claims. The ridge extends for nearly a nile south. At it's widest east west exposure it is about one half mile wide. The materal is a hard high calicum limestone light blue to white in color. This deposit is crossed by several wide fault zones the most notable being the West Side pass. whi At each of these fault zones there is an unknown amount of contaminated material. Also further north there are several beded beded zones, where folding may have occurred, which show mineralization. It will require extensive drilling to determine the number of tens of millions of tons of lime making quality stone which can be available for this purpose. Observation induces the writer to state there is no question that there is here enough available high quality stone to support a major lime industry.

Erilling is required to determine the amount and quality of the mineralization below the surface. This drilling should be in two seperate programs. A. for establishing the presence and the amount of mineralization which might be subject to open pit mining. B. To determine the extend of ores indicated at the surface for lode mining.

MATER

There is ample water developed and to be developed to support a moderate sized mill for milling lode ores. Additional water must be developed, probably through aquiring land with water below it to the east and south east of these mines. This is an urgent matter as Anemax will be doing the same thing and very soon. The additional water will be required for an open pit mill, that drilling may determine will be needed, or for a larger lode mining mill.

Marketing of products.

At this time shipping of free gold ores or of mixed lead gold ore is not paretical. Ist. because of the very high treatment and transportation costs. 2nd. because sampling methods at the smelters are designed for all alike concentrates. The concentrations of loose gold and other heavy fractions ride to low in the belt, sampling belt, to become a part of the assay. The small miners cantrobution is not now needed by the smelters and he is poorly taken care of.

Any operation covering preceous metals should be complete at the mill. All other metals should be concentrated and only concentrate shipped to a smelter.

Signed

O. G. Williams Chair Wass Office at the

Report

for

The Arizona Mining and Refining Company

At the request of Mr. O. C. Williams of Phoenix, Arizona, I made a field eramination of a group of 19 mining claims, situated in southeastern Pima County, Arizona. The examination was made in four days, April 16, 17, 18, and 19. I was accompanied and guided over the property by Mr. O. G. Williams, Executive Vice President of the Arizona Mining Company, whose address is 1616 East Orangewood Avenue, Phoenix, Arizona.

The claims are in the Rosemont area of the Relvetia Mining District and are within the boundaries of the Coronado National Forest, about 30 miles . southeasterly from the City of Tucson, about 4 miles west of state highway 83, the Mountain View-Sonoita road, and north of the Greaterville-Continental road. Most of the claims are accessible from mine roads which have been cut into the hill sides.

The claims are on the eastern slope of the Santa Rita Range at an elevation of approximately five thousand feet above sea level. Drainage is to the east into Davidson Creek and Cienaga Creek through steep-sided broad

needed begrat bold a star grandella se wood start in the last in t topography is rough, the eastern slopes of the range rising steeply to an escarpment on the northern end of the group of claims. The northernmost claim in the group, the Cloud Rest No. 1 Forth, is less than a mile south of Weigler Butto.

All of the area adjoining the Arizona Mining and Refining Company's claims on the north, for a distance of more than three miles, is covered by mine locations and the Banner (Anacouda) Mining Company has recently completed a very thorough and comprehensive program of exploratory drilling on that area. While the results of this drilling have not been made public, they must, judging from the amount of drilling done, have been encouraging. The Earner (Anaconda) Mining Company also owns several ratented claims which adjoir the AMARCO claims on the north (the Chicago and Cocomino claims), on the west

Ë

15 16 17

20

1

2

3

4 5

6

7

8

9

10

11

12

13

14

18

19

22

23

24

25

26

27

28

29

30

31

32

1 2

(the Excelsior or Teckndorf, the Empire, and the Mohawk Silver claims), and on the east (the Altamont and Fremont claims).

All of these claims are mentioned, along with the Golden Gate and Gold Fish claims of the AMARCO group, as having been producers, in Bulletin No. 582 of the United States Geological Survey, entitled "Mineral Deposits of the Santa Rita and Patagonia Mountains," by Frank C. Schrader, 1915. Many of them have been active producers since then.

There are 19 claims in the AMAECO group; namely, starting from the north:

Cloud Rest No. 1 North Blue Wing	Lexington Golden Oak	Golden Fortal Conglomerate
Cloud Rest Big Windy Cloud Rest No. 1 South	Banner Wiehbone West Side	Gold Fish Carbonate Silver Golden Fleece
Big Windy No. 1	Golden Gate	Golden Eagle Reserve

A sketch showing their general location and relationship to each other and to other claims is a part of this report.

The AMARCO claims are located in Section 36, T. 188., T. 15E., and Section 1, T. 198., R. 15E., G. & S. R. B. & M. in the north-central part of the Putagonia Quadrangle, in eastern Fine County, Arizona.

Geology

The geology is somewhat complex. A narrow but almost continuous belt of Paleozoic sedimentary rocks has been upturned, folded, and faulted. It rests upon the intrusive grenite or allied rocks on the west and is overlain by Mesozoic sediments or younger accumulation on the east.

The claims are all located in the Palcozoic limestone which is, in places, garnetiferous and epidotized. It is much faulted and crushed, the fault planes and structure dipping steeply to the south. There are many small cross faults and fractures and, in places, horizontal displacement. Locally the limestone is intruded by Mesozoic granular rocks, some of which are heavily impregnated with pyrite and chalcopyrite. The oxidized zone extends to depths of 100 to 300 feet, with copper carbonate and oxides as principal minerals. Other minerals noted were cerrusite, galera, bornite, and wulfenite. In places the ores carry excellent values in gold and silver. Bismutospherite (bismuth carbonate) was recognized in several specimens.

. 5

A large fault, known as the Santa Rita fault, extends along the axis of the Santa Rita Range, striking slightly east of north and dipping steeply to the east. Another fault (the Juanita fault) parallels it on the east, and there are other minor or correlary faults in a rather broad shear zone east of the contact between the Faleozoic quartzite and the limestone. There are many cross fractures, which are mineralized to various degrees.

The mineral in this area has been known, explored, and mined for many years; since in fact, before the Civil War, or at least since the late 1870's when the Old Dick, Heavy Weight, and Tally Ho claims were located by L. M. Grover. The Old Frijole mine was located and worked by Bill Fart and John Weigler in 1881.

As a result there are numerous shafts, tunnels, and open cuts and pits all over the entire area, with mineral found in nearly every opening.

Sixteen of the AMARCO claims were examined and samples taken from them. The results and conclusions arrived at from each examination are discussed hereafter, to wit. Values used in calculating assay results are from the latest quoted metal market, as follows: gold, \$43.50 per ounce; silver, \$1.75 per ounce; copper, \$.44 per pound; lead, \$.145 per pound; and zinc, \$.14 per pound.

Cloud Rest No. 1 North

The northernmost claim of the group is the Cloud Rest No. 1 North. Its north end line is common with the south end line of Eunner Mining Courany's patented Coconino claim, formerly owned by the Rosemont Copper Company and a former producer. Its eastern side line is common with the west side line of Banner's Excelsior claim. The claim strikes NSOE. U.S. Land Monument No. 1299, from which all claims in this area are oriented, is on the northern end of a ridge on this claim, about 450 feet south of the north end of the claim.

An open cut 6' wide, 20' long, and 6' to 20' deep is about 175 feet north of the south end of the claim. It follows a vertical fracture vein which strikes N57°E. A sample was cut across 30" of brown, iron-stained clay on the west side of this cut. It showed Cu, 0.27 percent; Au, 0.015 oz.; Ag, 0.3 oz.; Pb, 0.1 percent; total value \$3.83 per ton.

Traces of copper minerals (bornite, chalcopyrite, and oxides) and lead minerals (galena, cerrusite) can be found in the bedding planes of the limestone all around and over the top of the ridge on this claim.

Blue Wing

The Blue Wing claim overlaps the southwest corner of the Cloud Rest No. 1 North claim. Its north end line is common with the south end line of the patented Excelsior claim and its southwest corner overlaps Banner's patented Empire claim. It lies on the eastern slope of the main Santa Rita ridge.

Two openings were noted on this claim. One was an open side hill cut on the west side of the road, about 100 feet long, 35 feet wide, and a 20 foot face. There were two shallow pits in the bottom of this cut, each of them showing copper carbonate minerals. These showings were not sampled.

Another cut above this on the hill was an open cross cut 5 feet wide,

30 feet long, 12 foot face, bearing N49°W. From the face of the cut a 4' x 5'
cross cut tunnel extended 10 feet to a short drift. The open cross cut intersected a 15-inch vein striking NE and dipping SE. A sample (#1 Blue Wirg) was
cut across this vein about 5 feet above the floor of this cut and on its SW
wall. Assay shows Cu, 0.15 percent; Au, 0.01 oz.; Ag, 1.6 oz.; Pb, 4.2 percent;
Zn, 0.42 percent; total value \$17.57 per ton.

A second sample was taken from 2 feet above the floor which ran Cu, C.45 percent; Au. O.01 oz.; Ag. 12.4 oz.; Fb 25.9 percent; total value \$101.20 per ton.

Cloud Rest

The Cloud Rest claim lies directly south of the Cloud Rest No. 1 North claim and has a common end line with that claim. It strikes N2° - 30°W. At the time of the examination four men were working on this claim and the adjoining Big Windy claim. They had opened a side hill cut on the west side of the road which was about 100 feet long, 75 feet wide, and a face of 20 feet. They were opening a vein along the bedding plane of the limestone which contained copper carbonate, silicates, and oxides. The ore from this cut had been sorted and placed in three piles; one, the highest grade; another of a lower grade; and a third of milling grade ore. Each pile contained an estimated ten tons.

About 300 feet north of this cut is an old shaft 6' x 6' x 6' sunk on a vein 4' wide. Wulfenite (lead molybdate) is visible in this vein. It was not sampled.

Big Windy

The Big Windy claim lies west of the Cloud Rest claim, overlaps the Blue Wing claim on the north, has a common side line with the Eclipse (patented) claim on the west, and a common end line with the patented Mohawk Silver claim on the south. The Big Windy is an old claim and numerous shafts, trenches, and open cuts are found along the top of the ridge which it covers. In several places stock piles of high-grade ore (zinc) which was piled up in earlier days are found. The veins from which this ore was taken can be seen in the old openings, with ore still in place on a fault trending ML5°E. It is reported that 14 car loads of ore were shipped from this point.

Four samples were taken from a pit 9' x 11' x 10' deep on the co-called

Juanita fault. Sample #1 Big Windy was cut across a width of 24" from the

bottom (north side) of this pit. It ran Cu, 0.55 percent; Au, 0.005 oz.;

Ag, 2.1 oz.; total value \$8.72 per ton. Three samples were cut across the

fault on the south wall of the pit 4' above the floor. From left to right

they were respectively: #4 Big Windy, 48" wide; #3 Big Windy, 54" wide; and

#5 Big Windy, 16" wide. Assay results were: #3, Cu, 0.25 percent; Au, 0.01 oz.;

Ag 0.55 oz.; value \$3.59 per ton; #4, Cu, 0.1 percent; Au, 0.15 oz.; Ag, 0.6 oz.;

Pb, 0.3 percent; Zn 0.1 percent; value \$3.72 per ton; #5, Cu, 0.13 percent;

Au, 0.045 oz.; Ag, 0.6 oz.; value \$4.15 per ton—a weighted average of \$3.65

per ton for the entire width.

South of these old workings the present owners are working to expose the extension of the old ore bodies. They have made a surface cut extending some 25 feet across the fault and about ? feet deep in one place, and cuts over about the same width and depth at a somewhat higher level. In the upper cuts the vein filling was iron-stained quartz with gonge and some sericite mica. Three samples were cut across this vein as follows, from west to east: #?

Big Windy, 67" wide, Cu, 0.2 percent; Au, 0.01 cz.; Ag, 0.4 cz.; value \$2.89 per ton; #6 Big Windy, 16" wide, Cu, 0.6 percent; Au, 0.01 cz.; Ag, 0.35 cz.;

Zn, 0.3 percent; value \$2.48 per ton. About 6' still farther east #8 Big Windy was cut over a width of 30", Cu, 0.52 percent; Au, 0.1 oz.; Ag, 1.4 oz.; Pb, 0.1 percent; Zn, 0.9 percent; value \$10.26 per ton.

Cloud Rest No. 1 South

The Cloud Rest No. 1 South claim is a southerly extension of Cloud Rest claim and has a common end line with it. It overlaps the southwest corner of the Banner Mining Company's patented Altamont claim, and at the south end has a common end line with the Golden Cak claim, which is part of the group containing the Wishbone and Banner claims. None of these four claims were examined or sampled.

Big Windy No. 1

The Big Windy No. 1 claim extends south from the Big Windy and has a common side line with the patented Mohawk Silver claim on the west. Sample #1 was taken from a shallow shaft on a red-brown quartz gossan outcrop, which shows specular hematite. It ran Cu, 0.2 percent; Au, 0.01 cz.; value #2.19 per ton. Lexington

Extending southeasterly from the Big Windy al claim is the Lexington claim.

An inclined shaft is 5' x 5' x 25' deep on a very strong vein.

Sample #1 was cut across 19° in width on the west wall of the shaft, 15' below the collar. Results, Cu, 2.3 percent; Au, 0.21 oz.; Az, 1.8 oz.; Pb, 0.1 percent; Zn, 7.8 percent; value \$54.65 per ton.

West Side

The West Side claim end lines the Lerington on a southeasterly extension. There are several openings on this claim at the south end of the ridge. The openings are on a strong fault vein, width not known, showing lead and zinc minerals. An old shaft 85° deep is now inaccessible because of caving at top. Mineral (lead) showed in side of the shaft. Stockpiled ore in a dump.

Sample West Side #1 was cut across a 25" width of the vein. Results, Cu, 0.15 percent; Au, 0.36 oz.; Ag, 4.15 oz.; Po, 18 percent; Zn, 11.6 percent; value, \$32.70 per ton.

Golden Gate

The Golden Gate claim extends still farther southwesterly from the West Side claim. The claim, with the Golden Fortal claim contains the Golden Gate

mine, which was mentioned briefly in Schrader's 1915 report (U.S. G. S. Bulletin 582). The mine was worked since that report in 1932-33, and 1960, and has produced gold ores. A pile of the lower-grade ore is still found on the dump. Several hundred feet of workings and old stopes are still accessible from an adit which opens on the hill above the Box Canyon Road. Records of production are available.

A sample, Golden Gate #2, was taken off the dump ore. It ran Cu, 0.2 percent; Au, 0.32 oz.; Ag, 3.0 oz.; Po, 0.2 percent; value \$21.51 per ton.

Most of the equipment at the mine has been stolen or destroyed by vandals, but a compressor and diesel motor are still there.

Golden Portal

The Golden Portal claim overlaps the south end of the Golden Gate claim and extends easterly. The portal of the adit into the Golden Gate mine is actually on this claim.

A sample was cut, 42" wide, labeled Golden Portal #2, from the footwall of a fault just above the Box Canyon Read in a big open cut. Fault gonge. Results. Cu, 0.1 percent; Au, 0.14 oz.; Ag, 0.6 oz.; Fb, 0.4 percent; value \$9.18 per ten.

Gold Fish

The Gold Fish claim overlaps both the Lexington and West Side claims and extends southwesterly therefrom. This mine has a production record and considerable high-grade gold one has been taken from it. A stock pile of one is on the dump. An open cut leads to an adit tunnel which extends 200 feet to the east. About 20 feet inside the tunnel portal is a winge, now full of water (20 feet below the tunnel). The tunnel and winge follow a strong vein (fault) which scrikes E-W and dips 32° south. About 20 feet beyond the winge is a stope which extends to the surface.

Two samples were cut from this vein. Cold Fish #1 was cut across a 14s width about 100 feet east of the winze. It ran Cu, 0.15 percent; Au, 0.57 oz.; Ag, 1.5 oz.; Pb, 0.2 percent; value \$33.66 per ton. Gold Fish #2 was cut across a 16s width of the vein just under the hanging wall at the top of the winze. It ran Cu, 0.3 percent; Au, 0.91 oz.; Ag, 2.2 oz.; Fb, 0.8 percent; value \$48.39 per ton.

This vein, and presumably similar value, continues easterly along the strike and down the winze.

Carbonate Silver

The Carbonate Silver claim abuts the Gold Fish at its sothwest end line and strikes southeasterly. The AMARCO has cut an access road from the Box Canyon Road as an access road to the Gold Fish mine. This road has not been completed, but it traverses the Carbonate Silver claim, past the so-called Witzler shaft on that claim, and has disclosed the existence of several quartz veins striking northeasterly and dipping to the southeast. Samples were taken from six of these veins with astonishing results.

Sample #1 was cut across a 6" quartz vein in open cut on the west side of a draw about 100 feet above the Box Canyon Road. Assay results, Cu, 1.8 percent; Au, 0.43 oz.; Ag, 3.3 oz.; Fb, 5.4 percent; Zn, b.7 percent; value \$74.73 per ton.

Sample #2 was cut across a 10" voin from just above the water level in the Witzler shaft, an inclined shaft striking S48°E and dipping 32°. Water level was 24 feet below the collar of the shaft. Assay results, Cu, 0.2 percent; Au, 1.575 oz.; Ag, 3.1 oz.; Pb, 8.7 percent; Zn, 0.2 percent; value \$101.48 per ton.

Sample #3 was cut across a 4" vein on new road about 50 feet east of a metal water tank. Assay results, Cu, 1.3 percent; Au, 1.45 oz.; Ag, 5.5 oz.; Pb, 6.8 percent; Zn, 0.2 percent; value \$104.41 per ton.

Sample "4 was cut across a 6" vein on the side of the new road 150 feet above metal water tank. Assay results, Cu, 1.55 percent; Au, 0.015 oz.;

Ag, 6.0 oz.; (not assayed for Fb or Zn); value \$24.79 per ton.

Sample #5 was cut across soft white gorge material in open cut above
Box Canyon Road. Assay results, Cu, 1.5 percent; Au, 0.005 oz.; Ag, 1.0 oz.;
(not run for Pb or Zn); Talue \$15.17 per ton.

Sample #6 was cut from a quartz vein 2" to 4" thick on the side of the road at a sharp bend, above the metal tank. Assay results, Cu, 0.18 percent; Au, 12.22 oz.; Ag, 2.65 oz.; Pb, 7.2 percent; Zn, nil; value \$539.88 per ton.

DONALD F, KEED REGISTERED MINING ENGINEER ROUTE 2 - BOX 65 CHANDLER, ARIZONA 65224 PHONE 908-2765

Golden Fleece

The Colden Fleece claim side lines the Carbonate Silver claim on the west. Two samples were taken from this claim. Sample #1 was cut from a 44 quartz wein on the galena showing. Assay results, Cu, O.1 percent; Au. 1.58 oz.; Ag. 4.2 oz.; Pb. 7.7 percent; value \$99.29 per ton.

Sample #2 was cut from vein in open cut on the east side of the draw.

It ran Cu, O.1 percent; Au, O.77 oz.; Ag, 2.8 oz.; Pb, nil; Zn, O.1 percent; value \$39.56 per ton.

Golden Fagle

The Colden Fagle claim side lines the Colden Fleece claim on the west and is the farthest west of this group of claims. Only one sample was taken from this claim. It was cut across a narrow (6") vein on the side hill above a creek.

Assay results, Cu, 0.15 percent; Au, 0.31 oz.; Ag, 2.0 oz.; Fb, 3 percent; value \$27.00 per ton.

Reserve

The Reserve claim abuts the Golden Fleece and Golden Eagle claims and extends southeasterly across the Box Canyon Road. There has been no recent work done on this claim, but the remains of an old arrastra and retort furnace are found thereon. Three samples were taken from the outcrop of quartz veins found on the claim.

Sample #1 was taken from several small quartz veins on one outcrop. It ran Cu, 1.5 percent; Au, 0.055 oz.; Ag, 0.8 oz.; value \$16.99 per ton.

Sample #2 was cut across an 18" vein on the hill side. It ran Cu, 1.3 percent; Au, 0.465 oz.; Ag, 1.8 oz.; value \$34.82 per ton.

Sample #3 was cut across a 44" quartz vein exposed in the botton of the wash alongside the Box Canyon Road. It ran Cu, 1.3 percent; Au, 0.005 oz.; Ag, 0.1 oz.; Pb, nil; Zn. 0.1 percent; value \$12.11 per ton.

Others

Because of limitations of time and other factors, the Golden Cak, Wishbone, and Banner claims were not examined or sampled.

DONALD F. REED REGISTERED MINING ENGINE ROUTE 2 - BOX 63 CHANDLER, ARIZONA 85224 PHONE 988-2785

Conclusions

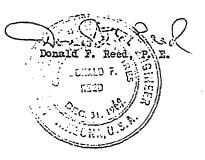
The Helvetia Mining District, which has no definite boundaries covers an area some 12 miles in length and 7 miles in width. It contains the north end of the Santa Rita Muntains and extends from Box Canyon on the south to and beyond the head of the Pantano wash on the north, and from the west base of the Santa Rita Mountains to Davidson Canyon on the west. The entire area has been recognized as being highly mineralized for 90 years, and more than 50 mines and prospects were listed in Frank C. Schrader's U.S. G. S. Bulletin No. 532, "Mineral Deposits of the Santa Rita and Patagonia Mountains, Arizona," published in 1915. Since then other properties have been discovered and worked. For many years market prices for copper, silver, lead, and zinc were very low, the costs of transporting the ores to smelters and treatment plants were high, and the companies operating properties in the district were forced to shut down.

Present market prices, coupled with modern-day advances in techniques of exploration, mining, transportation, and treatment of ores, render the development of these long dormant mineral deposits attractive to the investor.

Mineral was found on every one of the 16 claims examined. A total of 32 samples were taken. Assay values were less than \$5 per ton in only ? of these samples; between \$5 and \$20 in 11 samples; and more than \$20 per ton in 14 samples. Nine samples ran more than \$40 per ton; three were over \$100 per ton; and the highest, admittedly on a vein 2" to 4" wide, ran \$539.88 per ton. In no place sampled did we get a blank. It is true that most of the veins were narrow, but the mineralization is general throughout the bedding planes of the limestone, and several (from two to eight) veins were found on each of the 16 claims. In addition, there are innumerable cross fractures which are mineralized. Old mining practices involved the mining only of high-grade streaks or shoots of ore by underground methods. In an area where there are so many mineralized veins and fractures, where the mineralization is so widespread in all of the bedding planes and fractures of the limestone sediments, there is a distinct possibility that an open pit operation covering a large area is feasible.

The area covered and drilling pattern followed by the Banner Mining Company on the area immediately north of the claims covered by this report auggests that they must have considered such a possibility, and the amount of work done indicates that the results were not entirely discouraging.

The values found on several of the claims, notably the Blue Wing, Gold Fish, Golden Fleece, Carbonate Silver, Lexington, West Side, and possibly Reserve claims are such that small-scale mining could be profitable right away. The values of all of the rest of the claims, in the light of of the highly mineralized character of the entire area, are certainly sufficient to justify a prudent man, a man who is interested in mining, and who has some knowledge of mining, in expending time and money to explore further the possibilities of finding ore bodies which can be mined profitably.



H, CLYDE DAVIS TUCSON OFFICE 623-3341 HOME 887-2234 LELAND J. DAVIS
PHONE HUNTER 5-1863
2832 LAMBOURNE AVE.
BALT LAKE CITY, UTAH

September 27, 1965

Mr. Orin Williams Phoenix, Arizona

Dear Mr. Williams:

I had an opportunity to visit mining property known as Golden Gate, Golden Portal, East Side Mines, and adjoining claims, located in Box Canyon of the Greaterville mining district between the old mining camp of Greaterville and Rosemont. The claims are in Section 1 and 12 in T 19 S, R 15 E.

I visited this property in company of Mr. Axel Johnson and Orin Williams to determine the economic potential of the property.

The ore mineralization was found in the foot wall of a thrust fault in a light, coarse to medium grained granitic rock - (monzonite). Mineralization can be traced along thrust sheet or shear zone covering approximately one mile where the hanging wall is primarily conglomerate of Mesozoic age. The thrust zone is fairly flat from 50° to 70° dipping east. Further to the north of the property, limestone forms the hanging wall of probably Carboniferous limestone.

The mineralization is older than the thrust fault and located in where cross faulting of the main shear zone is prominent. This area of mineralization was associated with the Golden Gate mine where structual E - W movement of the granite intrusion is most intense.

Enclosed is a map showing the geological location of limestone and conglomerate against the granite with relationship to fault and mineralization.

Report taken from U.S.G.S. Bulletin paper 582 by F. C. Schroder indicated the value of this area:

In the Helvetia-Greaterville belt the granite is cut by two prominent sets of joints and a pronounced sheeting. The joint systems trend about north-northwest and east. The sheeting is nearly horizontal. On the Helvetia side it inclines gently to

AMARCO

Arizona Mining and Refining Company was incorporated August 3, 1962, with a capitalization of \$10,000,000. The company is a merger of several independent operations in the mining, chemical and manufacturing fields. Its principal holdings are the Golden Gate group and associated claims in the Helvetia-Rosemont and Greaterville mining districts, Pima County, Arizona.

Mines History and Development

The Golden Gate group of mines are reached by excellent roads, 44 miles south southeast of Tucson, Arizona. To reach them take Highway U. S. 80 southeast 21 miles to Mountain View, then turn south on Arizona State Highway 83 (paved), approximately 19 miles to the Thurber Ranch, Box Canyon Highway (graded gravel road), thence west four miles to the Golden Gate headquarters in the head of Box Canyon. The headquarters are to the east or right of the road, 150 yards up a side canyon, at an elevation of about 5100 feet. The claims lie at elevations of from 4700 feet to 6000 feet in the high rainfall area of the Santa Rita Mountains.

Until 1963 only the Golden Gate, Golden Eagle and Wishbone Mines could be reached with certainty by road. The Bureau of Mines had built an exploration road in the late 1940's through the Cloud Rest, Big Windy, and Big Windy No. 1 claims. This road, however, required a great deal of maintenance to keep open. This was particularly true of the Wasp Canyon dug way in a precipitous north mountain side.

The Golden Gate group of claims consists of the following original claims:

Claim Name	Date of Filing	<u>Book</u>	Page
Silver Carbonate	1-2-1892	C-C	398
Golden Eagle	2-12-1893	D-D	606
Golden Fleece	2-12-1893	D-D	607
Gold Fish	12-19,1893	D-D	618
Golden Gate	8-28-1894	E-E	195
Westside	8-28-1894	E-E	193
Lexington	8-28-1894	E-E	194
Conglomerate	8-28-1894	E-E	192

AMARCO - Mines History and Development

Golden Gate # 2
Gold Fish # 1
Gold Fish # 2
Gold Fish # 3
Gold Fish # 4
Lexington # 1
Lexington # 2
Lexington # 3

Claim Name	Date of Filing	Book	Page
Reserve	2-20-1906	K-K	433
Golden Oak	2-14-1907	L-L	538
Wishbone	5-11-1908	A-A	597
Blue Wing	11-25-1912	S-S	581
Cloud Rest	9-4-1912	S-S	511
Cloud Rest # 1			
South	1-8-1912	S-S	511
Cloud Rest # 1	•		
North	8-31-1917	B-B-B	277
Big Windy	9-20-1912	S-S	523
Banner	7-21-1916	S-S	35
Rock Ford	7-21-1916	T-T	324-5
Golden Arrow	•		
Golden Portal	7-5-1952	587	119
and the following	ng new claims		-
Golden Gate # 1			
Silver Carbonate S	South		
Golden Fleece # :	L		
Westside # 1			
Eastside Mine			
Eastside Mine # :			
Eastside Mine # :	2	•	
Eastside Mine # :	3		
Banner Fraction			
Golden Oak # 1			
Golden Arrow # 1			
Golden Arrow # 2			
C-14 C-+- # 0			

The principal geological feature of the district is a long overthrust fault (nearly six miles long), together with its compensating and cross faults. Almost all of the rich ores of the east (Rosemont side) of the Helvetia District have come from this fault system. There is now solid evidence of disseminated copper deposits extending east of this fault system, both in our claims and in the ground held by Anaconda to the north of us.

We control approximately one and one-half miles of the overthrust fault and two and one-half miles of its compensating and cross faults. South of our Blue Wing and Big Windy Claims, Anaconda controls one and a fraction claims along the overthrust fault. But, we control the compensating faults in this area as well as the apex to the north along the east side of the Excelsior claim of the Zeckendorf heirs. This is the area in which Banner Mining Company found a large anomaly of which we have the apex for the length of two claims (the heart of it).

The Golden Gate group of mines were put together by Thomas Deering and his daughter Mary E. who later became Mrs. Ulysses S. Grant the second. The first filing was in 1892 and the last in the 1920's. He made rich shipments from the oxide zones, developing many miles mines to shallow depth. Like many old-time miners he thought the values were running out when he hit the heavily leached zone above the water line. In all he spent more than \$500,000 in development work all of which was made upon the property.

In the Golden Gate he struck sulphide ore within four feet of the surface, and at 45 feet he was in trouble with water. Following Engineer George Kislingbury's advice, he drained the shaft with a tunnel which struck ore west of the shaft in 1918. From this point he drifted northwest into the big lead room from which he extracted high grade gold, silver, lead ores in excess of \$200.00 per ton. By this time Thomas Delering was too old to enjoy and work this deposit. He died about 1925. (I was in this lead room in 1932-33.). It was made up of massive glistening white cerucite lead carbonate with inclusions of gelena. The gelena carried very high values in silver and gold. As I remember it the room was perhaps seventy feet long

(1)

and thirty or more feet wide. The main tunnel went along the northeast side of the room to a small area that had been mined out above the tunnel at the northwest end. The balance of the ore was intact except for a whole maze of gopher-like tunnels that were run everywhere hunting for the galena.

In the mid 1930's Captain Rainy working with Mrs. Grant, shipped the ore from the lead room averaging over \$100.00 per ton, about one-third each in gold, silver and lead. He also shipped two cars of moly ore from a winze below the tunnel approaching the lead room.

Upon the death of Mrs. Grant, the property was inherited by Mr. Sidney Halburg. He rehabilitated the tunnel and tried to ship from the lead room, but it made too much water for his equipment. He then worked in the winze below the tunnel level. But again he found that he could not handle the water. He then rehabilitated the Golden Gate tunnels and extended them, and shipped several cars of ore before the gold closure edict by F.D.R. in 1942. While shipping from the mine he was also driving a lower tunnel to drain the main workings, this, too, was stopped by the edict.

The old tunnels and drifts on the main tunnel level of the Golden Gate mine probably exceed 700 feet. In addition the lower tunnel originating on the Golden Portal claim has a length in excess of 600 feet. The forward face of this tunnel is within 200 feet of the large ore bodies of the Golden Gate mine in the 40 foot fault area and within 250 feet of the downward extension of the lead room.

This tunnel is in excellent condition except for about 60 feet which needs timbering. All track, pipe, and other facilities have been removed. It will cost \$7,000.00 to \$8,000.00 to equip and extend this tunnel to the downward extensions of the first ore shoots which have been mined above the main tunnel level. The forward 12 feet of this tunnel is in low grade zinc ore with some of the cleavages showing finely divided lead carbonate of recent deposition by percolating water.

In the Gold Fish mine water did not become a problem until the mid 1930's when the winze was sunk to 50 feet below the tunnel level. This winze was enlarged into a large stope. Water, while a problem to the early operators who had to remove it in buckets, will not be a problem with power facilities available now. The ore shipped from the Gold Fish mine by Halburg grossed \$57.00 to \$65.00 per ton all in gold, after lead penalty but before freight and smelter cost. In addition to shipping high grade he piled up three hundred tons of good milling ore there with more than 1000 tons in the older dump.

Much free gold was mined from the surface veins of the Golden Fleece and Silver Carbonate mines by Deering, and before him by the Indians for altar ornaments for the San Xavier and Tumacacori Missions. On the Golden Fleece claim many years ago, a lessee by the name of Ziggler sunk a shaft upon a vein intersection to a depth of 50 feet. He encountered water which he was able to control to that depth with a hand cylinder pump. The wall rock of this tunnel today, down to the water level, when panned, yields coarse gold sometimes to small pea size. There are thousands of tons of reject (milling) ore in stock piles and dumps upon these two claims.

The Westside mine was sunk to a depth of 85 feet in an area where the fault is 25 to 35 feet wide. There are thousands of tons of complex milling ore on the dump, and some high grade, plus \$100.00 ore in piles. This high grade is reputed to come from a 14 inch wide vein within the vein. Schrader in his book MINERAL DEPOSITS of the Santa Rita and Patagonia Mountains, describes this shaft and a cross-cut back to the limestone on the 55 foot level, as yielding free gold when panned, from all the iron and silica areas from the shaft back to the limestone and in the shaft to the surface. This shaft is not usable at present having been worked along its north and east sides with the low grade and waste dumped into the shaft.

The Lexington claim adjoining to the north, in two openings shows franklinite ore containing lead, silver, gold, bismuth and vanadium, as well as its zinc, iron and manganese.

The Big Windy claim was first opened up as the Juanita Silver Mine. Some 14 cars of high grade ore were shipped from it during and immediately after World War I. This ore was packed on burros for more than a mile to the head of a wagon road, then hauled by wagons 21 miles to the railroad. There is now one-half car of 45% zinc ore in one pile and hundreds of tons of ore that will average 33% zinc. Thousands of tons are available to mining from its several shafts and trenches and tunnels.

In 1959 the writer, O. G. Williams, noticed large deposits of what appeared to be granulated silica centering in the Blue Wing claim. This silica proved to be recrystalized limestone (Calcium Carbonate). Further exploration shows this deposit to extend into the Cloud Rest and Cloud Rest No. 1 claims to the east, and that part of it has crystal formations up to an inch or more in size. This is an exceptionally high grade deposit. The surface samples exceed 98% Calcium Carbonate with 1% of silica, most of which we think is due to surface contamination. The installation of a complete reduction milling facility upon our mill sites, capable of handling both oxide

and sulphide ores, is a must for the proper operation of this group of mines. We have ample water from springs and mines to handle such an operation, and added water can be had from wells. The power lines of the Tucson Gas and Electric Company cross our south claim. They are willing and anxious to extend them to a central point where we will accept delivery of power from them.

LATER DEVELOPMENT

Beginning in 1959, we installed mining machinery at the Golden Gate and rehabilitated the outer tunnel area and started a by-pass tunnel to intersect the main tunnel beyond the massive cave-in in the area of earliest mining. This tunnel is within 30 or 40 feet of the main tunnel at the back end of known massive cave-in.

This summer we rehabilitated the old tunnel to a point approximately 125 feet beyond the beginning of the by-pass tunnel, and made available several thousand tons of excellent milling ore and some high grade, in a well developed stope. We also tried to open the old tunnel through the caved area removing in excess of 600 tons of caved roof rock. However, careful sampling proved this roof rock to be millable ore carrying lead, zinc, silver and gold, with the gold alone exceeding \$6.00 per ton. With more than a thousand tons of milling ore broken in the old tunnel ahead and up to 30 feet above, and an unknown quantity to break, we decided to wait and run it through a mill.

We also uncovered not less than 17 feet of milling ore in the fault being under the caved roof rock. The downward extension of this area could be as rich as the lead room further back. It is higher in the oxide zone.

In 1961 we built two mine roads, one on either side of Cycamore Canyon, extending back approximately 800 feet. When completed these will open up the Golden Fleece, Gold Fish No. 1, Silver Carbonate, and Gold Fish Claims.

In 1963, we built a new road connecting our headquarters with the Wasp Canyon dugway. We rebuilt the Wasp Canyon dugway. We then extended the road to the Blue Wing, upper Cloud Rest and Cloud Rest No. 1 north mines. We opened several levels in the Calcium Carbonate deposit and drilled 300 feet in the Calcium. We made a new road extension to the Big Windy Mines, making their rich ores available for shipping and treatment. We also commenced a road through the Wishbone, Banner and Golden Oak mines to the Westside and Lexington mines.

We have accumulated considerable mining and milling equipment, much of which is already at the mines, together with a lot of heavy timbers.

We have nearly complete assay equipment and chemicals.

We have a camp nuclei, with millsite room to expand. Between the filings of our predecessors in interest and our own, our water rights are considerable. We have plans for further increasing and conserving our surface water. Mine development will add to this and as the area is well watered, wells will produce any additional we may need.

Electric power is available from the Ft. Huachuca mains which cross our south claims. The Tucson Gas and Electric Company has promised to install lines and transformers within four weeks upon excellent terms.

Availability of high grade Calcium Carbonate and White Marble Ores Reserves

We refer to a report of reserves by Kirk Den Baars, Geologist from Tucson, in which he states that three blocks of Calcium Carbonate rock were observed with a combined length of 1200 feet taking the core of good rock from these blocks, the true width of which will average 185 feet and leaving the upper and lower strata in place, the tonage reserves can be estimated as follows:

Using 12 cubic feet per ton as an average density figure and 65 feet as a practical quarry depth, we arrive at the following tonage:

185' \times 1200' \times 65', divided by 12 = 1,202,500 tons. With some additional effort of stripping waste rock, these reserves could be increased to about 1,500,000 tons of usable rock.

More than one-half of our product can use the slightly stained border rock, excluded by the above report, as this quality is needed only for our paint pigment and exotic uses.

You will also note that the Calcium Carbonate is within a white and stained marble and calcite rock structure. Our mill is designed to also process the white marble to sell as size graded, dust free, high grade roof rock, stucco sand, terrazzo and epoxy aggregates, ground cover and other products.

By using the border Calcium in cattle and poultry feed bone supplement, and the marble in aggregates, we increase our exposed reserves to above 3,000,000 tons.

⇒ie •	Sample Thickn		· 5	ingle Cor ample Wid	ath	Value	Cu	Ag.	TO
234							.08 90¢		\$1
231 232	1')	3'0"	.3 99¢	36.3) 25.2)	28.9	\$ 89.59	.11 \$1.23 .31 \$3.42	30 57¢ 60 \$1.14	
233	3.6		not in or	d at side	of 231	& 232 (23	ore 33) 232/231		
229	2.5	2.5	-2 66¢	10.2	10.2	\$ 31.62	.17 \$1.90 ore	10 19¢	
230	2.		not in c	e at side	•	}	230/229	,	Spring state
219 220	2')	4.	.1 33¢	33.0) 8.4)		Į.	.30 \$3.36 .14 \$1.57	•	\$
	2.5). 2')	4.5	.1 33¢ .1 33¢	19.8) 5.6)	13.4	\$ 41.54	.35 \$3.92 .07 .17	tr tr	\$.
	1.5			28.5 ce at side			.15 \$1.68 ore 215	tr 5 \$90.73	\$
	1.7	1.7'	.5 \$1.6	5 27 - 2	27.2	\$84.32	.34 \$3.81	.35 .67	
213	1.6'		not in o	re at side	of 212	213	ore 212	•	
511	31	3 '	.4 \$1.3	2 31.7	31.7	\$98.27	23 \$2.58	.30 .57	Şl.
214	2.5'		not in o	re at side	e of 211	214	ore 211		
206 207 208	1.5')	ູ້ 8 '	.3 99¢ .4 \$1.3 .7 \$2.3		10.2	\$ 31.62	.11 \$1.23 .19 \$2.13 .27 \$3.02	.55 1.05 .30 .57	
209 210	1.5')	3.5	.5 \$1.6 .5 \$1.6	5 45.1) 5 2.9)	20.97	\$ 65.11	.ll \$1.23 .09 \$1.01		(\$
223	2 '	2 '	.1.33¢	17.	17.	\$ 52.70	,	1.5 \$2.85	\$:
224	2.5		not in o	re at side	e of 223	224 22			
.502	3.0	3.0	.4 \$1.3	2 2.0	2.0	\$6.60	.05 56¢	.25 45¢	\$
217 218	•	4	.1 33¢	24:4)	8.65	\$26.82	-2117¢	.40) 25¢	\$27
227 228	1')	4.	.1 33¢) .2 66¢)	15:7) 13.4)	13.1	\$40.61	.1 \$1.12 .15 1.68		
221	1.5	1.5	·1 33¢	31.0	31.0	\$96.10	-15	.30 57¢	(\$98 63
222	2.5	2.5	1 33¢	30.4	30.4	\$94.24	.45 \$5.04		(100
,235	2 '	2	-1 33¢	3.3	3.3	\$10.23	.5 \$5.60	tr	16
236	2.5	2.5	.1 33¢	2.3	2.3	7.13	-7 \$7.84	-10 19¢	15
, 237	2.5	2.5	.1 33¢	2.6	2.6	8.06	.05 56¢	.30 57¢	٠ ٢
	_		•	•	22.	•	. .		7

CENGRA WIDTH DEPTH FEET TONS PER TON BLOCK VALUE	MPLE	BLOCK		. BLOCK	CORTC	SHUKI	VALUE	•
7,234 30' x 1.8' 54' x 55' 2,970' 330 tons @ \$102.21 \$ 23,729.30 1,231) 20' x 3' 60' x 55' 3,300' 366 tons @ 93.75 31,500.00 1,229 16' x 2.5' 40' x 55' 2,200' 244 tons @ 34.37 8,386.28 1,219 55' x 4' 220' x 55' 12,000' 1,344 tons @ 67.25 90,384.00 1,225 85' x 4.5' 382.5' x 55' 21,037' 2,337 tons @ 43.97 102,757.89 1,215 25' x 1.6' 37.5' x 45' 1,687' 187 tons @ 90.73 16,956.51 2,206 3,205 14' x 6' 84' x 40' 2,640' 293 tons @ 102.74 30,102.82 3,206 3,209 3,209 3,209 3,360' 373 tons @ 51.91 19,362.43 3,208 1,208 3,209 3	<u> Maer</u>	LENGTH	WIDTH	DEPTH	FEET	•	_	BLOCK VALUE
),231) 20' x 3' 60' x 55' 3,300' 366 tons @ 93.75 31,500.00),229 16' x 2.5' 40' x 55' 2,200' 244 tons @ 34.37 8,386.28),219) 55' x 4' 220' x 55' 12,000' 1,344 tons @ 67.25 90,384.00),225) 85' x 4.5' 382.5' x 55' 21,037' 2,337 tons @ 43.97 102,757.89),215) 25' x 1.6' 37.5' x 45' 1,687' 187 tons @ 90.73 16,966.51),212) 22' x 3' 66' x 40' 2,640' 293 tons @ 102.74 30,102.82 0,206) 0,207) 14' x 6' 84' x 40' 3,360' 373 tons @ 51.91 19,362.43 0,205) 15' x 3' 45' x 40' 1,800' 200 tons @ 8.93 1,786.00 0,217) 0,218) 19' x 4' 76' x 40' 3,040' 337 tons @ 27.57 9,291.09 0,227) 14' x 4' 56' x 30' 1,680' 186 tons @ 43.26 8,046.36 0,221) 0,222) 15' x :2' 30' x 30' 900' 100 tons @ 99.43 9,943.00		,	ī.	•		,		
),232)),229 16'x 2.5' 40' x 55' 2,200' 244 tons 34.37 8,386.28),219) 55' x 4' 220' x 55' 12,000' 1,344 tons 67.25 90,384.00),225) 85' x 4.5' 382.5' x 55' 21,037' 2,337 tons 9 43.97 102,757.89),215) 25' x 1.6' 37.5' x 45' 1,687' 187 tons 90.73 16,966.51),212 22' x 3' 66' x 40' 2,640' 293 tons 90.74 30,102.82 0,206) 0,207 14' x 6' 84' x 40' 3,360' 373 tons 9 51.91 19,362.43 0,205 15' x 3' 45' x 40' 1,800' 200 tons 9 8.93 1,786.00 0,217 0,218 19' x 4' 76' x 40' 3,040' 337 tons 9 27.57 9,291.09 0,227 14' x 4' 56' x 30' 1,680' 186 tons 9 43.26 8,046.36 0,221 15' x 2' 30' x 30' 900' 100 tons 9 99.43 9,943.00	.,234	30' x	1.8'	54' x 55'	2,970	330 tons @	\$102.21	\$ 33,729.30
1),229 16'x 2.5' 40'x 55' 2,200' 244 tons @ 34.37 8,386.28 1),219 55'x 4' 220'x 55' 12,000' 1,344 tons @ 67.25 90,384.00 1,225) 85'x 4.5' 382.5'x 55' 21,037' 2,337 tons @ 43.97 102,757.89 1,215 25'x 1.6' 37.5'x 45' 1,687' 187 tons @ 90.73 16,956.51 3,212 22'x 3' 66'x 40' 2,640' 293 tons @ 102.74 30,102.82 0,206 1,207 14'x 6' 84'x 40' 3,360' 373 tons @ 51.91 19,362.43 1,208 1,209 2,209 15'x 3' 45'x 45' 720' 80 tons @ 57.22 4,577.60 2,205 15'x 3' 45'x 40' 1,800' 200 tons @ 8.93 1,786.00 0,217 19'x 4' 76'x 40' 3,040' 337 tons @ 27.57 9,291.09 0,227 14'x 4' 56'x 30' 1,680' 186 tons @ 43.26 8,046.36 0,221 15'x 2' 30'x 30' 900' 100 tons @ 99.43 9,943.00		20.' x	3'	60'x 55'	3,300	366 tons @	93.75	31,500.00
),219) 55'x 4' 220'x 55' 12,000' 1,344 tons @ 67.25 90,384.00),225) 85'x 4.5' 382.5'x 55' 21,037' 2,337 tons @ 43.97 102,757.89),215) 25'x 1.6' 37.5'x 45' 1,687' 187 tons @ 90.73 16,956.51),212) 22'x 3' 66'x 40' 2,640' 293 tons @ 102.74 30,102.82 0,206) 0,207) 14'x 6' 84'x 40' 3,360' 373 tons @ 51.91 19,362.43 0,208) 0,210) ,223 8'x 2' 16'x 45' 720' 80 tons @ 57.22 4,577.60 0,205 15'x 3' 45'x 40' 1,800' 200 tons @ 8.93 1,786.00 0,217) 19'x 4' 76'x 40' 3,040' 337 tons @ 27.57 9,291.09 0,227) 14'x 4' 56'x 30' 1,680' 186 tons @ 43.26 8,046.36 0,221) 15'x:2' 30'x 30' 900' 100 tons @ 99.43 9,943.00		•						
1,344 tons @ 67.25 90,384.00 1,225 85'x 4.5' 382.5'x 55' 21,037' 2,337 tons @ 43.97 102,757.89 1,215 25'x 1.6' 37.5'x 45' 1,687' 187 tons @ 90.73 16,986.51 1,211 22'x 3' 66'x 40' 2,640' 293 tons @ 102.74 30,102.82 1,206 0,207 14'x 6' 84'x 40' 3,360' 373 tons @ 51.91 19,362.43 1,209 0,210 223 8'x 2' 16'x 45' 720' 80 tons @ 57.22 4,577.60 1,223 8'x 2' 16'x 45' 720' 80 tons @ 57.22 4,577.60 1,234 200 tons @ 8.93 1,786.00 1,217 0,218 19'x 4' 76'x 40' 3,040' 337 tons @ 27.57 9,291.09 1,227 14'x 4' 56'x 30' 1,680' 186 tons @ 43.26 8,046.36 1,221 15'x 2' 30'x 30' 900' 100 tons @ 99.43 9,943.00),229	16'×	2.5	40' x 55'	2,200	244 tons @	34.37	8,386.28
1,344 tons @ 67.25 90,384.00 1,225 85'x 4.5' 382.5'x 55' 21,037' 2,337 tons @ 43.97 102,757.89 1,215 25'x 1.6' 37.5'x 45' 1,687' 187 tons @ 90.73 16,986.51 1,212 22'x 3' 66'x 40' 2,640' 293 tons @ 102.74 30,102.82 1,207 1,208 1,209 1,209 1,208 1,209 1,209 1,209 1,209 1,209 1,209 1,209 1,209 1,209 1,209 1,209 1,223 8'x 2' 16'x 45' 720' 80 tons @ 57.22 4,577.60 1,209 1,209 1,209 1,209 1,209 1,209),219)	55' x	4.	· 220'x 55'	12,000			
7,226) 7,215) 25'x 1.6' 37.5'x 45' 1,687' 187 tons @ 90.73 16,956.51 7,211 22'x 3' 66'x 40' 2,640' 293 tons @ 102.74 30,102.82 0,206) 0,207) 14'x 6' 84'x 40' 3,360' 373 tons @ 51.91 19,362.43 1,208) 0,209) 0,210) 8'x 2' 16'x 45' 720' 80 tons @ 57.22 4,577.60 2,205 15'x 3' 45'x 40' 1,800' 200 tons @ 8.93 1,786.00 0,217) 19'x 4' 76'x 40' 3,040' 337 tons @ 27.57 9,291.09 0,227) 14'x 4' .56'x 30' 1,680' 186 tons @ 43.26 8,046.36 0,227) 15'x 2' 30'x 30' 900' 100 tons @ 99.43 9,943.00),220)				·	1.344 tons @	67.25	90,384.00
0,215) 25'x 1.6' 37.5'x 45' 1,687' 187 tons @ 90.73 16,966.51 0,211 22'x 3' 66'x 40' 2,640' 293 tons @ 102.74 30,102.82 0,206) 0,207) 14'x 6' 84'x 40' 3,360' 373 tons @ 51.91 19,362.43 0,208) 0,209) 0,210) 23. 8'x 2' 16'x 45' 720' 80 tons @ 57.22 4,577.60 0,205 15'x 3' 45'x 40' 1,800' 200 tons @ 8.93 1,786.00 0,217) 19'x 4' 76'x 40' 3,040' 337 tons @ 27.57 9,291.09 0,227) 14'x 4' 56'x 30' 1,680' 186 tons @ 43.26 8,046.36 0,228) 15'x 2' 30'x 30' 900' 100 tons @ 99.43 9,943.00		85'x	4.5	382.5'x 55'	21,037	2,337 tons @	43.97	102,757.89
0,212) 22'x 3' 66'x 40' 2,640' 293 tons @ 102.74 30,102.82 0,206) 0,207) 14'x 6' 84'x 40' 3,360' 373 tons @ 51.91 19,362.43 0,209) 0,210) 223' 8'x 2' 16'x 45' 720' 80 tons @ 57.22 4,577.60 0,205 15'x 3' 45'x 40' 1,800' 200 tons @ 8.93 1,786.00 0,217) 19'x 4' 76'x 40' 3,040' 337 tons @ 27.57 9,291.09 0,227) 14'x 4' 56'x 30' 1,680' 186 tons @ 43.26 8,046.36 0,221) 15'x 2' 30'x 30' 900' 100 tons @ 99.43 9,943.00	1,220)						• •	
0,212) 22'x 3' 66'x 40' 2,640' 293 tons @ 102.74 30,102.82 0,206) 0,207) 14'x 6' 84'x 40' 3,360' 373 tons @ 51.91 19,362.43 0,209) 0,210) 223' 8'x 2' 16'x 45' 720' 80 tons @ 57.22 4,577.60 0,205 15'x 3' 45'x 40' 1,800' 200 tons @ 8.93 1,786.00 0,217) 19'x 4' 76'x 40' 3,040' 337 tons @ 27.57 9,291.09 0,227) 14'x 4' 56'x 30' 1,680' 186 tons @ 43.26 8,046.36 0,221) 15'x 2' 30'x 30' 900' 100 tons @ 99.43 9,943.00	2,215)	251 ~	ז בי	 37 513- 451	7 6071	307		
0,206) 0,207) 14'x 6' 84'x 40' 3,360' 373 tons @ 51.91 19,362.43 223. 8'x 2' 16'x 45' 720' 80 tons @ 57.22 4,577.60 2,205 15'x 3' 45'x 40' 1,800' 200 tons @ 8.93 1,786.00 0,217) 0,218) 19'x 4' 76'x 40' 3,040' 337 tons @ 27.57 9,291.09 0,227) 0,228) 14'x 4' 56'x 30' 1,680' 186 tons @ 43.26 8,046.36 0,221) 0,222) 15'x 2' 30'x 30' 900' 100 tons @ 99.43 9,943.00		23 1	1.0	37.3.3.43	7,087	187 tons @	90.73	16,956.51
0,206) 0,207) 14'x 6' 84'x 40' 3,360' 373 tons @ 51.91 19,362.43 223. 8'x 2' 16'x 45' 720' 80 tons @ 57.22 4,577.60 2,205 15'x 3' 45'x 40' 1,800' 200 tons @ 8.93 1,786.00 0,217) 0,218) 19'x 4' 76'x 40' 3,040' 337 tons @ 27.57 9,291.09 0,227) 0,228) 14'x 4' 56'x 30' 1,680' 186 tons @ 43.26 8,046.36 0,221) 0,222) 15'x 2' 30'x 30' 900' 100 tons @ 99.43 9,943.00							•	
0,207) 14'x 6' 84'x 40' 3,360' 373 tons @ 51.91 19,362.43 3,209) 0,210) ,223 8'x 2' 16'x 45' 720' 80 tons @ 57.22 4,577.60 0,205 15'x 3' 45'x 40' 1,800' 200 tons @ 8.93 1,786.00 0,217) 0,218) 19'x 4' 76'x 40' 3,040' 337 tons @ 27.57 9.291.09 0,227) 0,228) 0,221) 15'x 2' 30'x 30' 1,680' 186 tons @ 43.26 8,046.36 0,221) 0,222) 15'x 2' 30'x 30' 900' 100 tons @ 99.43 9,943.00	0,211	22'x	3'	66' x 40'	2,640'	293 tons @	102.74	30,102.82
0,207) 14'x 6' 84'x 40' 3,360' 373 tons @ 51.91 19,362.43 3,209) 0,210) ,223 8'x 2' 16'x 45' 720' 80 tons @ 57.22 4,577.60 0,205 15'x 3' 45'x 40' 1,800' 200 tons @ 8.93 1,786.00 0,217) 0,218) 19'x 4' 76'x 40' 3,040' 337 tons @ 27.57 9.291.09 0,227) 0,228) 0,221) 15'x 2' 30'x 30' 1,680' 186 tons @ 43.26 8,046.36 0,221) 0,222) 15'x 2' 30'x 30' 900' 100 tons @ 99.43 9,943.00	0,206)	•						
3,208) 3,209) 0,210) ,223 8'x 2' 16'x 45' 720' 80 tons @ 57.22 4,577.60 3,205 15'x 3' 45'x 40' 1,800' 200 tons @ 8.93 1,786.00 0,217) 0,218) 19'x 4' 76'x 40' 3,040' 337 tons @ 27.57 9,291.09 0,227) 0,228) 14'x 4' 56'x 30' 1,680' 186 tons @ 43.26 8,046.36 0,221) 0,221) 15'x 2' 30'x 30' 900' 100 tons @ 99.43 9,943.00	0,207)		6'	84'x 40'	3,360'	373 tons @	51.91	19.362.43
0,210) ,223 8'x 2' 16'x 45' 720' 80 tons @ 57.22 4,577.60 0,205 15'x 3' 45'x 40' 1,800' 200 tons @ 8.93 1,786.00 0,217) 0,218) 19'x 4' 76'x 40' 3,040' 337 tons @ 27.57 9,291.09 0,227) 14'x 4' 56'x 30' 1,680' 186 tons @ 43.26 8,046.36 0,221) 0,221) 15'x 2' 30'x 30' 900' 100 tons @ 99.43 9,943.00			•	\				
,223 8'x 2' 16'x 45' 720' 80 tons @ 57.22 4,577.60 0,205 15'x 3' 45'x 40' 1,800' 200 tons @ 8.93 1,786.00 0,217) 19'x 4' 76'x 40' 3,040' 337 tons @ 27.57 9,291.09 0,227) 14'x 4' 56'x 30' 1,680' 186 tons @ 43.26 8,046.36 0,221) 15'x 2' 30'x 30' 900' 100 tons @ 99.43 9,943.00	-	·			•			
0,205 15'x 3' 45'x 40' 1,800' 200 tons @ 8.93 1,786.00 0,217) 19'x 4' 76'x 40' 3,040' 337 tons @ 27.57 9,291.09 0,227) 14'x 4' 56'x 30' 1,680' 186 tons @ 43.26 8,046.36 0,228) 15'x 2' 30'x 30' 900' 100 tons @ 99.43 9,943.00						•		
0,217) 19'x 4' 76'x 40' 3,040' 337 tons @ 27.57 9,291.09 0,227) 14'x 4' 56'x 30' 1,680' 186 tons @ 43.26 8,046.36 0,221) 0,221) 15'x 2' 30'x 30' 900' 100 tons @ 99.43 9,943.00	,223	8'x	2' ~	16'x 45'	720	80 tons @	57.22	4,577.60
0,217) 19'x 4' 76'x 40' 3,040' 337 tons @ 27.57 9,291.09 0,227) 14'x 4' 56'x 30' 1,680' 186 tons @ 43.26 8,046.36 0,221) 0,221) 15'x 2' 30'x 30' 900' 100 tons @ 99.43 9,943.00	0,205	15' x	31	45' x 40'	1.800	200 tons @	8 93	1 705 00
0,218) 0,227) 14'x 4' 56' x 30' 1,680' 186 tons @ 43.26 8.046.36 0,221) 0,221) 15' x : 2' 30' x 30' 900' 100 tons @ 99.43 9,943.00			٠.			. 200 20119	0.55	
0,227) 14'x 4' 56' x 30' 1,680' 186 tons @ 43.26 8.046.36 0,221) 15' x : 2' 30' x 30' 900' 100 tons @ 99.43 9,943.00		19 x	4'.	76'x 40'	3,040	337 tons @	27.57	9,291.09
0,221) 0,221) 15' x ·· 2' 30' x 30' 900' 100 tons @ 99.43 9,943.00	0,210)				•		•	
0,221) 0,221) 15' x ·· 2' 30' x 30' 900' 100 tons @ 99.43 9,943.00	0,227)	14'x	41	56' x 30'	1 680	185 tone @	13 26	2 046 26
0,222)					1,000.	100 cons @	43.20	8,046.36
0,222)		3 =						
		T2, X	-2 '	30, × 30,	900	100 tons @	99.43	9,943.00
6,377 tons \$366,833.28	-,,		• ,		.		•	
6,377 tons \$366,833.28					• • •			
			• • •			6,377 tons	•	\$366,833.28

Average value per ton \$57.52

valuation of Sheet #1 ig Windy (old) zinc workings

Concerning the America (ARIZO/A MINING AND RUFINING COMPANY) properties in the Helvetia and Greaterville Districts, of Pisa County, Arizona.

F. C. Schroder in U. S. G. S. Bulletin paper 582 has given a broad outline of the geology of this area. Except for the recently developed and clossly held geology resulting from the Banner-Anaconda-AMAMAX operations it is still the best available. Graduat students have added to the geology of Schroder, and there has been some developed by the U. S. bureau of nines, but all these have done too little leg and other faild work to properly understand the complex geology of the area.

The magmic action here was multiple, and it was spread over a very long time period, perhaps several eras of geological time.

The magmas were themselves multiple or lingering hot spots were active at different times in different places with thrust forces acting upon some areas from differing or divergent directions.

The minoralization was as divorse in timing as the magnic action itself.

H. Clyde Davis, Geologist, has stated that; " The main thrust fault, the Santa Rita fault, younger than the mineralization". However; we have found that the bretcha of Golden Gate mountain is younger than the fault, as it overran it, and displaced it, or segments of it. And that the contact fault between this intrussive and the country rock is not only mineralized but that much rich ore has been shipped from it, and much remains. Further that the ore was both richer and more plentifull nearesst to the point at which this contact over run the main fault. For many years there was exposed in the air shaft of the Golden Gate mine a segment of ore showing the twisting upward path of the ore from the Santa Rita fault into the contact fault. This would indicate that mineralization persisted through the fault even after it had been in some places displaced by intrussive action. Due to heavy caving in the main tunnel area of the Golden Gato mine we lost access to a tunnel area along the main fault. He were not familier with this potion of the old workings but decided to drive a by-pass tunnel around the caved area and intersect the tunnel further in. This we started in 1965. After progressing beyond the area of intended intersection we gave up. In 1966 we tryed again and intersected the fault and the tunnel some distance beyond where we anticipated we would. We attributed the bend to a twisting of the structure.

We decided to dig down and see what type and how large the ore body was. We were surprised to find that the ore ran out and had all been mined to a depth of about three feet below the tunnel floor level, and that the rock below was quartzmonzonite. Further excavation revealed drag ore so repossing as to suggest that a portion of the vein had been pushed outward and upward.

We had entered the fault before we entered the vein eres. At the extreem hanging wall of the existing fault material, up against the intrussive, at eye level was a streak of copper ore, this increased in size until at the floor level it was perhaps 6" in width. This ore was like the contact ore except that it carried more copper. Smilled ore we recovered along the old tunnel indicated a different ore type, probably an earlier deposition. Further north within the properties there has been found chunks of rich ore in dyking, showing that showing that these brechts dykes passed through ore in place. They also contain angular asgments of the sedimentery rocks they passed through.

The purpose of these statements is to show the long prolonged time involved in the magnic action and the mineralization.

THE AMANCO PROPERTIES page two

At our north end first Banner Mining Company, then Anaconda, then ANAMAX have developed a very important copper ore body mostly in the limestone rocks as replacement ore. There are two known quartz monzonite intrussive plugs which are though to be the mineralizers. However, and remember this: The limestone areas to the east and down structure from the intrusives also carry copper. I believe that other mineralizers are burried in many places in the districts.

The above mentioned structure extends from ANAHAX ground south into our own for more than a mile without sersous disturbance in character. Our northern 3,000 are along the apex where ANAHAX controls the ground on either side. We have a peice of the ANAHAX copper ore body. We estimate between 2,000 and 2,500 of that ore body is within our north claims. From that point south all of the ore shutes within the easts dipping faults dip to the south, that is all known ore shutes. This indicates another ore body farther south, probably in the Deering Springs area.

For a distance of perhaps five or six miles south of the north end of Golden Gate mountain the devonion limestone is faulted out, leaving only a few floating segments and they all semall. For some distance north of that point the other sadiments are faulted out in part or in total amount. To the west of Golden Gate mountain within Box Canyon basin areas of the pre-cambrain granite is faulted out. Further south all that remains of the pre-cambrain granite is floating islands. The skyline to the south-east of the Box Canyon road, in this area, is a red sandstone mesa, in reality a porphyry mountain wearing a thin sandston cover. Hard against the mesa and only faintly visable is another ridge, This is of porphyry with a crown of quartz. At the top the quartz and the porphyry carry but little minerals, being leached out. As one goes down the exposed north side the mountain becomes pinker and pinker them a red. At the bottom in the creaks one can sometimes pick up quartz monzonite samples carrieing considerable coppor.

At the south west end of this mountain where it breaks into the south fork of Box Canyon, high up in a ridge there is a large quartz dyke, the extention of a branch of the one on top, this carries copper and other metals, as done the country rock over a considerable area. At the east north east end of this exposed purphyry ridge the sediments stand dipping at a steep angle to the east north east. Further south at the end of the higher mountain porphyry is exposed under the sand stone in mant places. This is also true of a sandstone covered ridge which extends south from the south west end of the higher mountain, further south the porphyry comes through in many places, and still further south it is exposed in hills and ridges that extend almost to Grnite mountain at Greaterville, which is of similar composition.

The south fork of Box Canyon is cut deep in a very wide multiple sheerzone area which lies between two major uplifts to the north and the south. Porphyry is evident in places on both sides.

To the east of this structure, the porphyry of the high ridge excetra, is another very wide shear zone. The soft materials of this zone have been intruded by many many veins carring heavy concentrations of bintite. This bintite has not been tested for verniculite. It does seem very heavy in many places and may carry metal values.

The south fork of Box Canyon contains perhaps millions of tons of heavy gravels which carry some grain size gold and very much fine gold in the black sand. We are now evaluating this to see if it is commercial in grade.

AMARCO PROFERENCES
page three

Within these claims there are many mines which have operated in the past to a greater or lessor extent. The metals produced were gold and silver, lead zinc copper and molibdinum. Until the late 1930s gold and silver were of most concern.

The present owners have through the years seent their efforts in three main channels. A. perfecting the title to the claims. B. Development work including access roads. And C. Expansion of our holdings.

For 1974 was changed through the actions of our neighbor ALALA. Preliminary to opening up the big min right at our north end they hired eleven survey crows to stake all available open land. The ward got out they wanted no neighbors. We had surveyed an area to the east of our nain older claims and were preparing to leasurly add them to our holdings. It became apparent that to save these claims we must act without delay. In the race for claims we secured a strip one mile wide and two miles long. But we lost to ALLICAL a strip east of that one half mile wide and two miles long. This ground which we had saved we drilled in september. Anamax had monumented over our own and they started drilling flour days after we started. After two holes they backed of. As they were working south we then extended our claims to the south. Our present possition is outlined upon the quadrangle map. We could lose some of the proposed expansion ground yet.

Our main metal is copper. Much money will be spent before an open pitt copper mine is in operation. Fortunatly we have much lode ore which we can mine and mill. From these operations we can continue to develop the copper ground to the point of major mine financing or sale.

We are fortunate in also having large tonages of non metal ore at the surface. We have some tens of millions of tons of high calcium limestone enough for a line industry, in an area where much lime is required in the flotation process. We also have several million tons of calcium carbonate, much of it point pigment and pigment extender grades.

At present we need cash or colateral withshich to finace a milling operation.

O. G. Williams Chief Exec. Officer

NEWMONT EXPLORATION LIMITED

A SUBSIDIARY OF NEWMONT MINING CORPORATION 1806 WEST GRANT ROAD, SUITE 101 TUCSON, ARIZONA 85745

TELECOPIER 602-882-6866

July 21, 1989

Mr. Ron Little Matilda Mining Inc. 827 Greenwood Drive Lodi, CA 95240

Dear Mr. Little:

Enclosed are assay results, sample descriptions, and a sample location map from my recent investigation of your BC claims located in the Santa Rita Mountains, Pima County, Arizona.

The veins do contain gold, but unfortunately do not represent a bulk mineable target of sufficient size to be of interest by Newmont at this time. I, therefore, cannot recommend any further work on your claims by Newmont. I hope these assays will be of use to you or Mr. Platt. Thank you for the opportunity to examine your claims.

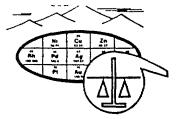
Sincerely,

Alan D. Branham

alan D. Brankan /SAR

ADB/sar

cc: Wally Platt, w/enclosures /



SKYLINE LABS, INC.

1775 W. Sahuaro Dr. • P.O. Box 50106 Tucson, Arizona 85703 (602) 622-4836

REPORT OF ANALYSIS

JOB NO. TEL 860 June 12, 1989 PROJECT NO. AZ GENERAL RECEIVED 5-16-89 NT-149919 - NT-149934 PAGE 1 OF 1

NEWMONT EXPLORATION, LTD. Attn: Mr. Alan Branham 1806 W. Grant Rd., Suite 101 Tucson, AZ 85745

Analysis of 1 Pulp and 15 Rock Samples

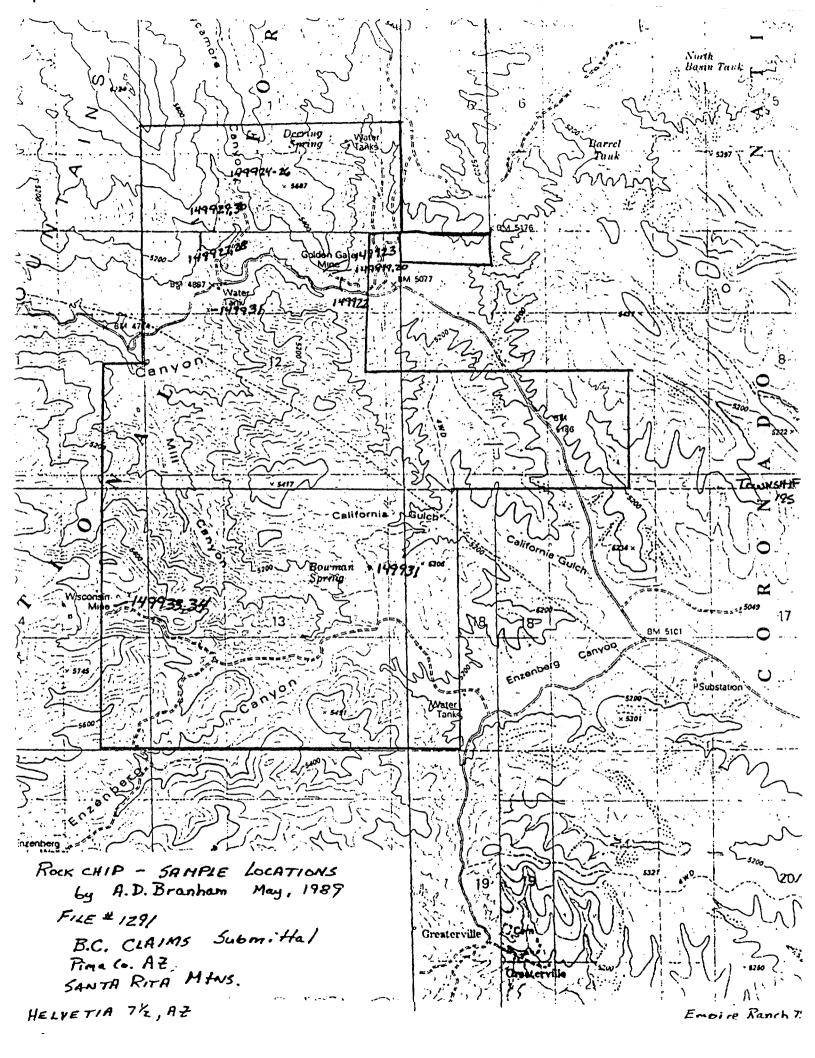
	ITEM	SAMPLE NUMBER	(ppm)	Ag (ppm).	(ppm)	
						na curir curir curir curir curir curir curir curir
	1	NT-149919	₹.02	.20	12.	
	2	NT-149920	5.80	72.00	2800.	
	3	NT-149921	⟨.02	.40	12.	BC CLA IMS
	4	NT-149922	.14	1.20	38.	120
	5	NT-149923	6.00	1.10	185.	OLT
	6	NT-149924	10.00	76.00	610.	-
	7	NT-149925	2.30	52.00	1350.	
	8	NT-149926	(.02	.85	740.	
					7 10 1	
	9	NT-149927	.33	.80	55.	
	10	NT-149928	2.80	2.40	40.	
	11	NT-149929	3.30	3.20	70.	
	12	NT-149930	2.80	1.60	95.	
•	1-	1,,,,,,,	2.00	1.00	75.	
	13	NT-149931	.08	2.80	100.	
	14	NT-149932	⟨.02	.40	6.	
	15	NT-149933	⟨.02	7.30	18.	
	16	NT-149934				\wedge
	10	141-147734	⟨.02	.40	46.	/ \

William L. Lehmbeck Arizona Registered Assayer No. 9425

James A. Martin Arizona Registered Assayer No. 11122

Rock Descriptions for: B.C. Claims T19S R15E S12 Santa Rita Mtns., Pima Co. AZ Collected by A. D. Branham May 15, 1989

Sample #	Location	Description
149919	Golden Gate Por	rtal - 8ft chip across arkosic sandstone/
		fault.
149920	6.6. Dump	Dump grab of quartz limonite vein, trace
		of copper oxide.
149921	Mine Road	Red andesite with orange FeOx. Crushed.
149922	Decline	A 4 ft. sample across low angle fault in
		pink arkose. N23W 45N.
149923	NOT ON PROPERT	Y- STANDARD G03.(Tests lab accuracy)
149924	Deer Spr. Adit	Grab off dump of 4-6 inch quartz-
		pyrite-galena veins in arkosic
		conglomerate.
149925	Ditto	Three ft chip across fault with two
		quartz limonite - galena- coperoxide
		veins (4-6") in granitic conglomerate.
149926	Ditto	Wallrock volcanic conglomerate outside
		vein area (5ît).
149927	Golden Fleece	Adit- Four foot stringer zone of quartz
		limonite veins in orange conlomerate,
		sericite.
149928	ditto	Dump grab quartz -limonite veins.
149929	shaft	Quartz limonite vein grab off dump.
149930	ditto	Grab of conglomerate wallrock off dump.
149931	Sect 12-trench	4-8" quartz veins in granite.
149932	At gate	Quartz carbonate vein in
	,	conglomerate(2"). Wallrock sampled.
149933	Wisconsin Mine	Ten inch quartz-pyrite vein in
		granodiorite.
149934	Ditto	Granodiorite wallrock



Exploration Department

Frederick T. Gravbeal Chief Geologist

November 9, 1993

RECEIVED

NOV 1 5 1993

Mr. Leonard Weitz Chairman and President Chief Consolidated Mining Co. 866 Second Avenue New York, N.Y. 10017

EXPLORATION DEPARTMENT

Re: Tintic District, Utah

Dear Leonard:

It seems that great mining districts never die and Tintic is a classic example. We have followed the efforts of those who followed us into the district and have no doubt that activity there will be on going for many decades. By copy of this letter I will ask Jim Sell to call you directly and confirm exactly what information we have that you do not have. I recall that all of our work was forwarded to you and that no proprietary confidential interpretative studies were ever made. This was a straight-forward exploration effort with no black boxes. In any case if we have something which would help Jim will know about it.

With best regards.

Very truly yours,

3 red Maybed

F. T. Graybeal

cc: JDSell -w/attach.

Phoned Wests - he has all the doly but wondered if we had any additional that to could usp. I said - no new info - he says -

Chief Consolidated Mining Co.

866 SECOND AVENUE NEW YORK, N.Y. 10017

F. T. G.

NG / 8 1993

RECEIVED

NOV 8 1993

EXPLORATION DEFT (212) 688-8130 FAX #(212) 758-1764 G. D. V

November 3, 1993

NOV 8 1993

Mr. G.D. Van Voorhis Vice President Exploration ASARCO Incorporated 180 Maiden Lane New York, New York 10038

Dear Mr. Van Voorhis:

LEONARD WEITZ

CHAIRMAN AND PRESIDENT

When ASARCO terminated its lease with Chief that covered Chief's Main Tintic District properties in Utah, ASARCO retained its geological interpretive data on the Plutus orebody. In fact, the major part of ASARCO's efforts from 1980 to 1984 involved projecting the precious metal potential of the Plutus, primarily in the area above the water table between 1400 and 1800 feet. ASARCO's drilling program for 1985 to develop the Plutus orebody was canceled toward the end of 1984 at which time Chief and ASARCO agreed to terminate the lease.

Chief has received several inquires regarding the Plutus, possibly as a result of Kennecott's joint venture with Centurian Mines just to the south, or because the land is owned by Chief in fee. Whatever reasons notwithstanding, since ASARCO has informed Chief that it has no further interest in the District, we would be most appreciative if ASARCO made its Tintic records available to Chief. Of course, Chief would agree to reimburse ASARCO for its expenses incurred in copying or forwarding the material.

Sincerely yours,

Leonard Weitz

LW/bk